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that the first light 35 and the second light 36 be produced respectively at different timing, either. --

Please replace the paragraph beginning at page 6, line 6, with the following rewritten paragraph:

-- As shown in Fig. 3, n_1 , n_2 , n_3 and n_4 are respective refractive indexes of air and the different light-penetrable materials. When each parameter (the refractive index n , the angle θ , the thickness δ , the distance d_1 between the first light and the second light, and the distance d_2 between the second light and the third light) conforms with the formulas (a) and (b) as follows, the optical paths of the three lights could be identical. --

REMARKS

I. Status

In the Office Action mailed June 26, 2002, the Examiner noted that claims 1-13 were pending, and rejected claims 1-13. Thus, in view of the foregoing, claims 1-13 remain pending for reconsideration, which is requested. No new matter has been added. The applicant respectfully traverses the rejection.

II. Drawings

The objections to the drawings by the Examiner are noted and are corrected with new drawings submitted herewith.

III. Rejection of claims under 35 U.S.C. § 102(b)

Claims 1, 3-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Vincent et al. The applicant respectfully traverses this rejection. Vincent et al. discloses in FIG. 20 a device which uses a combination of two

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dichroic layer devices whose purpose is to combine a plurality of optical beams having different spectral ranges. The invention of Vincent et al. is to be used in color cameras, color printers, or other devices requiring the combination of colors. For example, FIG. 31 shows the combining of different spectral optical beams for the purpose of transmission over a single optical fiber. In contrast, in the present invention, "a first optical coating plane and a second optical coating plane" reflect two separate light beams to an "identical optical axis" (claims 1, 11, 12). Thus for example, two optical paths, such as the optical path of FIG. 1 and the optical path of FIG. 2 can be bent to the "identical optical axis" thus lowering the assembly cost. The purpose of the invention of Vincent et. al. is not to lower assembly cost by bending optical paths to an "identical optical axis" (claims 1, 11, 12), but rather the invention of Vincent et al. combines optical beams having different spectral ranges. For example, Vincent et al. would not be able to support routing different optical beams at different timings as recited in claim 6.

IV. Rejection of claims under 35 U.S.C. § 103(a)

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato et al. in view of Vincent et al. The applicant respectfully traverses this rejection. The invention of Vincent et al. does not disclose an optical device used for an optical read/write head as recited in claim 2 because such device designed to combine optical beams of different colors would not work in an optical read/write head for the purpose of bending optical paths to an "identical optical axis" (claims 1, 11, 12). Thus, the Examiner has cited Kato et al. for its disclosure of an optical read/write head. Because Kato et al. nor any of the other cited references does not provide a motivation for combining the apparatus of the present invention with an optical read/write head, combining the reference Kato et al. and Vincent et al. is hindsight reasoning. That is, the Examiner states that this combination would have been obvious "to do this to simplify the optical path and reduce the cost and weight of the optical read/write head by substituting the two beam splitters of Kato et al. for the single optical device as taught by Vincent et al." but the Office Action does not provide any quotations from prior art to

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support this observation outside of the specification for the present invention. Furthermore, it would be impossible to directly substitute the device of Vincent et al. into the optical head of Kato et al. because the device of Vincent et al. which combines color frequencies would not function correctly in the optical head of Kato et al. to bend two optical paths into an "identical optical axis". And furthermore the device of Vincent et al. having two separate components does not represent a simplification over the two beam splitters of Kato et al. Therefore, the present invention recited in independent claims 1, 11, 12 and depending claims therefrom is not rendered obvious by the cited prior art.

V. Dependent Claims

The dependent claims depend from the above-discussed independent claims and are patentable over the prior art for the reasons discussed above. The dependent claims also recite features not taught or suggested by the prior art. For example, claim 6 recites a first and second light generated at different timings. Nothing in the prior art teaches or suggests such a feature. The other dependent claims also recite additional distinguishing features. It is submitted that the dependent claims are independently patentable over the prior art.

VI. Concluding Matters

In view of the foregoing remarks, it is respectfully submitted that each of the claims distinguishes over the prior art, and therefore, defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowance of all the pending claims is respectfully requested.

Should there be any remaining questions to correct format matters, it is urged that the Examiner contact the undersigned attorney with a telephone interview to expedite and complete prosecution.

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If any further fees are required in connection with the filing of this response, please charge same to our Deposit Account No. 04-1175.

Respectfully submitted,
DISCOVISION ASSOCIATES

Date: 9/24/02


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Attachment: Version with Markings to Show Changes Made

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Title:

The title beginning at page 1, line 1 has been replaced with the following new title:

OPTICAL APPARATUS FOR REFLECTING LIGHT BEAMS TO AN IDENTICAL OPTICAL AXIS

In the Specification

The paragraph beginning on page 1, line 21 has been amended as follows:

Generally, the optical path of an optical read/write head is designed according to the combinations of the foresaid optical paths. Therefore, two beam splitters 12[,] and two laser sources 13 are needed for the design containing two bending optical paths, and a beam 12 and two laser sources 13 are needed for the design containing a straightforward optical path and a bending optical path.

The paragraph beginning on page 2, line 7 has been amended as follows:

The conventional optical path system has several drawbacks, for example the cost of the materials is high, and the process is complicated. It is difficult to regulate the optical axes of different optical paths as an identical optical axis, so that the quality of the read/write head is decreased.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE (Cont.)

The paragraph beginning at page 3, lines 23-25 has been replaced with the following rewritten paragraph:

[The present invention may best be understood through the following descriptions with reference to the accompanying drawings, in which:

BRIEF BRIEF DESCRIPTION ON THE DRAWINGS]

BRIEF DESCRIPTION ON THE DRAWINGS

The present invention may best be understood through the following description with reference to the accompanying drawings, in which:

The paragraph beginning on page 5, line 3 has been amended as follows:

Certainly, when the optical device provided by the present invention is used in an optical fiber system, it is not restricted that the first optical coating plane 33 be parallel to the second optical coating plane 34. It is not restricted that the first light 35 and the second light 36 be produced respectively at different timing, either.

The paragraph beginning on page 6, line 6 has been amended as follows:

As shown in Fig. 3, n_1 , n_2 , n_3 and n_4 are respective refractive indexes of air and the different light-penetrable materials. When each parameter (the refractive index n , the angle θ , the thickness δ , the distance d_1 between the first light and the second light, and the distance d_2 between the second light and the third light) conforms with the formulas (a) and (b) as follows, the optical paths of the three lights could be identical.